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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,701	06/28/2001	Michael J. Borg	10007022-1	4684

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

STEVENS, ROBERT

ART UNIT	PAPER NUMBER
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2176

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/892,701

Applicant(s)

BORG, MICHAEL J.

Examiner

Robert M Stevens

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2001.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-20 are pending in Application No. 09/892,701, entitled "System and Method to Automatically Complete Electronic Forms", filed 6/28/2001 by Borg. Claims 1, 8 and 15 are independent.
2. The Office acknowledges Information Disclosure Statement filed 1/13/2004.

Priority

3. Applicant makes no claim to either domestic or foreign priority.

Specification

4. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

5. A new Abstract should be submitted because: the Abstract reiterates the claims.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. **Claims 1, 6-8 and 13-19 are rejected under 35 USC 102(e)** as being anticipated by Light et al (US Patent No. 6,192,380, filed Mar. 31, 1998 and issued Feb. 20, 2001, hereafter referred to as "Light").

Regarding independent claim 1, Light discloses:

A method for automated form completion for a user of a computer, the method comprising the steps of:
identifying one or more fields in a form; (col. 3 lines 3-5) and
automatically supplying information corresponding to the one or more
identified fields without intervention by the user. (Abstract and col. 4 lines 1-14,

especially "The Fill-In Unit 330 inserts the data into then space associated with the tag.")

Regarding claim 6, which is dependent upon claim 1, Light further discloses:

further comprising the step of prompting the user to accept the automatically supplied information. (Fig. 5A #550)

Regarding claim 7, which is dependent upon claim 1, Light further discloses:

further comprising the step of enabling the user to enter information for fields unidentified in the form. (col. 6 lines 35-42 discloses leaving certain fields blank)

Independent claims 8 and 15 are directed to a computer readable medium and a system which each implement the method of claim 1. As such, claims 8 and 15 are substantially similar to claim 1, and therefore likewise rejected.

Claims 13-14 are substantially similar to claims 6-7, respectively, and therefore likewise rejected.

Regarding claim 16, which is dependent upon claim 15, Light further discloses:

wherein the field identifier module (Fig. 3 #315) comprises:

a parser (Fig. 3 #350) configured to generate a table of fields; (col. 3 lines 3-5)

a spell checker (Fig. 3 #360) configured to store alternative spellings of fields; (col. 3 lines 60-62)

*a thesaurus (Fig. 3 #360) configured to store synonyms of fields; (col. 3 lines 60-62, re; alternative field name tags) and
a comparison algorithm (Fig. 3 #360) connected to the parser, the spell checker and the thesaurus, the comparison algorithm configured to determine the identity of each field based on the respective similarity of each field to one or more fields in the database. (col. 3 lines 60-62)*

Regarding claim 17, which is dependent upon claim 16, Light further discloses:

further comprising:

a data collector module (Fig. 3 #320) configured to read the form; (col. 2 line 67 – col. 3 line 5) and

an information checker (Fig. 3 #320) comprising:

a user interface configured to display an unidentified field (col. 6 lines 35-42 discloses leaving certain fields blank) and user selectable options to the user; (col. 7 lines 11-17 disclose giving a user the option to add data to a database)

associated logic configured to determine the identity of the unidentified field in response to a selection; (col. 7 lines 11-17 disclose adding new data [unidentified field value] to a database) and

the information checker is further configured to store the determined identity of the unidentified field to the database. (col. 7 lines 15-18, re: store new data in a database)

Regarding claim 18, which is dependent upon claim 17, Light further discloses:

wherein the form is an e-form readable in a Web browser. (col. 2 line 67 – col. 3 line 5)

Regarding claim 19, which is dependent upon claim 18, Light further discloses:

wherein the data collector module is configured to access the source code of the e-form. (col. 2 line 67 – col. 3 line 5)

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 2-4 and 9-11 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Light et al (US Patent No. 6,192,380, filed Mar. 31, 1998 and issued Feb. 20, 2001, hereafter referred to as "Light") in view of Poreh et al. (US Patent No. 6,040,832, filed Aug. 10, 1998 and issued Mar. 21, 2000, relying on a divisional application filed Oct. 10, 1995, hereafter referred to as "Poreh").

Regarding claim 2, Light further discloses:

determining the correct spelling of one or more words associated with the one or more fields; (col. 3 lines 62-65, re: "misspellings") and

...

However, Light does not explicitly disclose:

determining a synonym for one or more words associated with the one or more fields.

Poreh, though, discloses:

determining a synonym for one or more words associated with the one or more fields. (Fig. 4 #70, teaches use of thesaurus)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Poreh for the benefit of Light, because to do so would allow a user to capture, process and route data entries via a GUI, as taught by Poreh in col. 2 lines 11-17. These references were all applicable to the same field of endeavor, i.e., graphical user interface (GUI) programming.

Regarding claim 3, which is dependent upon claim 2, Light further discloses:

determining the identity of the one or more fields based on the respective similarity of each field to a previously stored field. (col. 3 lines 60-62)

Regarding claim 4, which is dependent upon claim 3, Light further discloses:

wherein the form is a Web page (col. 2 lines 63-67) and the method further comprises:

reading a source code of the Web page; (col. 2 lines 67 – col. 3 line 5) and determining fields based on associated mark-up tags. (col. 3 lines 44-59)

Claims 9-11 are substantially similar to claims 2-4, respectively, and therefore likewise rejected.

10. **Claims 5 and 12 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Light et al (US Patent No. 6,192,380, filed Mar. 31, 1998 and issued Feb. 20, 2001, hereafter referred

to as "Light") in view of Poreh et al. (US Patent No. 6,040,832, filed Aug. 10, 1998 and issued Mar. 21, 2000, relying on a divisional application filed Oct. 10, 1995, hereafter referred to as "Poreh") and further in view of Sargur N. Srihari ("Document Image Understanding", Dept. of Computer Science, SUNY Buffalo, IEEE Document No. CH2345-7/86/000/0087, © 1996, pp. 87-96, hereafter "Srihari").

Regarding claim 5, Light further discloses:

wherein the form is a Web page (col. 2 lines 63-67)

However, Light does not explicitly disclose:

and the method further comprises:

capturing an image of the Web Web page;
identifying text by performing OCR on the image;
identifying field entry box(es) by performing edge analyses on the image;
and determining coordinates of the identified fields entry box(es).

Srihari, though, discloses:

and the method further comprises:

capturing an image of the page; (p. 87 Abstract, re: digital document image)
identifying text by performing OCR on the image; (p. 91, 1st paragraph under "6. Text Recognition")
identifying field entry box(es) by performing edge analyses on the image; (p. 91, particularly the 3rd paragraph under "5. Graphics Processing", regarding "thinned image of unit width" [i.e., edge]) and
determining coordinates of the identified fields entry box(es). (p. 91, 1st two paragraphs under "5. Graphics Processing", especially regarding "pixels" [i.e., coordinates])

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Srihari for the benefit of Light in view of Poreh, because to do so would

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allow one to determine the role of a document component, such as a text block, as taught by Srihari on p. 87 in the 1st paragraph under the heading "Document Understanding Components". These references were all applicable to the same field of endeavor, i.e., document processing.

Claim 12 is substantially similar to claim 5, and therefore likewise rejected.

11. **Claim 20 is rejected under 35 U.S.C. 103(a)** as being unpatentable over Light et al (US Patent No. 6,192,380, filed Mar. 31, 1998 and issued Feb. 20, 2001, hereafter referred to as "Light") in view of Sargur N. Srihari ("Document Image Understanding", Dept. of Computer Science, SUNY Buffalo, IEEE Document No. CH2345-7/86/000/0087, © 1996, pp. 87-96, hereafter "Srihari").

Regarding claim 20, which is dependent upon claim 18, Light does not explicitly disclose:

wherein the data collector module is configured to OCR a captured image of the e-form.

Srihari, though, discloses:

wherein the data collector module is configured to OCR a captured image of the e-form. (p. 87, Abstract discloses optically scanning and digitizing and p. 91 section entitled "6. Text Recognition")

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Srihari for the benefit of Light, because to do so would allow one to determine the role of a document component, such as a text block, as taught by Srihari on p. 87 in the 1st paragraph under the heading "Document Understanding Components". These references were all applicable to the same field of endeavor, i.e., document processing.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Non-patent Literature

"The Well FORMed Cookie", downloaded from:
web.archive.org/web/20000309234634/http://strange.softcafe.net/~jimbo/javascript/cookies/wffcook.html, The James Group, Aug. 9, 2000, pp. 1-18 (plus date page from WayBack Machine).

Lunt, Penny, "VisionShape's Mid-Speed Heavyweight", Imaging and Document Solutions, Nov. 1998, p. 1.

Srihari, Sargur N., "Document Image Understanding", Dept. of Computer Science, SUNY Buffalo, IEEE Document No. CH2345-7/86/000/0087, © 1996, pp. 87-96.

Dorai, Chritra, et al., "On the Evolution of Videotext Description Scheme and Its Validation Experiments for MPEG-7", Proceedings of the 2000 ACM Workshops on Multimedia, Oct. 30 – Nov. 3, 2000, pp. 67-70.

"Table of Contents", Proceedings of the 2000 ACM Workshops on Multimedia, Oct. 30 – Nov. 3, 2000, pp. 1-2.

US Patent Application Publications

Pennell et al

US2002/0013788

	<i>US Patents</i>
Nishiyama et al	6,421,693
Maxwell et al	6,589,290
Kennedy et al	6,651,217
Zlotnick	6,640,009
Flannery	6,594,405

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert M Stevens whose telephone number is (571) 272-4102.


The examiner can normally be reached on M-F 6:00 - 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H. Feild can be reached on (571) 272-4090. The current fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Additionally, the main number for Technology Center 2100 is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert M. Stevens
Art Unit 2176
Date: November 22, 2004


JOSEPH FEILD
SUPERVISORY PATENT EXAMINER

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